Name:

Functions, Parameters and Local Variables - Part 1

Go through the lesson slide deck on functions, parameters and local variables. Fill out the charts for each problem you complete.

Warm up

What do you remember about creating functions?	
What do you remember about parameters?	
What does a function call look like?	

Example

What is the parameter?	
Why is it a parameter?	
What are the local variables?	
Why are they local variables?	
What will a function call look like?	

```python
def slideshow(topic):
    if topic == 1:
        the_list1 = dbacks_pos
        the_list2 = dbacks_players
        team = "Diamondbacks"
    else:
        the_list1 = rangers_pos
        the_list2 = rangers_players
        team = "Rangers"
    for index in range(len(the_list1)):
        display.clear()
        display.print(team)
        display.print(the_list1[index])
        display.print(the_list2[index])
        sleep(2)
    display.clear()
    display.print("End of list")
```

A 🌶️

What would you call the function?	
What are the variables needed?	
What are the parameters?	
What are the local variables?	
Does it need a return?	
What will a function call look like?	

```python
# Ending message
if count == 4:
    display.clear()
    display.draw_text("You WON", scale=4,

else:
    display.clear()
    display.draw_text("You LOST", scale=4,
```

B 🌶️

What would you call the function?	
What are the variables needed?	
What are the parameters?	
What are the local variables?	
Does it need a return?	
What will a function call look like?	

```python
if buttons.was_pressed(BTN_B):
    # Reset the board for each game
    reset()
    # Select first random number
    num1 = random.randrange(6) + 1
    if num == 1:
        one_roll()
    elif num == 2:
        two_roll()
    elif num == 3:
        three_roll()
    elif num == 4:
        four_roll()
    elif num == 5:
        five_roll()
    else:
        six_roll()
    sleep(delay)
```

C 🌶️

What would you call the function?	
What are the variables needed?	
What are the parameters?	
What are the local variables?	
Does it need a return?	
What will a function call look like?	

```python
    pixels.set(3, BLACK)
if buttons.was_pressed(BTN_A):
    audio.mp3("sounds/welcome")
if buttons.was_pressed(BTN_B):
    display.show(pics.HAPPY)

sleep(delay)
display.fill(BLACK)
display.show("Press a Button!")
sleep(delay)
```

D 🌶️🌶️

What would you call the function?	
What are the variables needed?	
What are the parameters?	
What are the local variables?	
Does it need a return?	

```python
red = random.randrange(0, 255)
green = random.randrange(0, 255)
blue = random.randrange(0, 255)
color = (red, green, blue)

pixels.set(1, color)

how_many = 4
# turn off pixel LEDs
for lite in range(how_many):
    pixels.set(lite, BLACK)
```

What will a function call look like?		

E 🌶️🌶️

What would you call the function?	
What are the variables needed?	
What are the parameters?	
What are the local variables?	
Does it need a return?	
What will a function call look like?	

```python
while True:
    red = random.randrange(0, 255)
    green = random.randrange(0, 255)
    blue = random.randrange(0, 255)
    color = (red, green, blue)

    pixels.set(0, color)

    red = random.randrange(0, 255)
    green = random.randrange(0, 255)
    blue = random.randrange(0, 255)
    color = (red, green, blue)
```

F 🌶️🌶️

What would you call the function?	
What are the variables needed?	
What are the parameters?	
What are the local variables?	
Does it need a return?	
What will a function call look like?	

```python
if buttons.was_pressed(BTN_L):
    choice = 4
if buttons.was_pressed(BTN_R):
    choice = 5

my_image = my_list[choice]

if type(my_image) == tuple:
    display.fill(my_image)
else:
    display.show(my_image)
```

Reflection

In your own words, what is a parameter?	
What are some reasons a variable needs to be a parameter?	
What is a local variable?	
What are some reasons a variable would be local?	
What must you do to execute the code in	

a function?	
Give two benefits of using functions:	

SUCCESS CRITERIA:
- ❏ Define parameter and local variable
- ❏ Explain reasons to use a parameter
- ❏ Explain reasons to use local variables
- ❏ Decide a function name for a section of code
- ❏ Determine parameters for a function
- ❏ Determine local variables for a function
- ❏ Write a function call